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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants : James E. Fleming and Jason Buck Somes
Application No. : 10/087,200
Filed : March 1, 2002
For : METHOD AND APPARATUS FOR PROKARYOTIC
AND EUKARYOTIC CELL QUANTITATION

Group Art Unit : 1623
Docket No. : 390054.401C1
Date : July 24, 2002

Commissioner for Patents
Washington, DC 20231

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents:

In accordance with 37 C.F.R. §§ 1.56 and 1.97 through 1.98, applicants wish to make known to the Patent and Trademark Office the references set forth on the attached form PTO-1449 (copies of the cited references are enclosed).

Applicant notes that reference BD (DE 19832007 A1) is written in German. Accordingly, the Examiner's attention is respectfully directed to reference BG which sets forth an English language abstract.

As to any reference supplied, applicants do not admit that it is "prior art" under 35 U.S.C. §§ 102 or 103, and specifically reserve the right to traverse or antedate any such reference, as by a showing under 37 C.F.R. § 1.131 or other method. Although the aforesaid references are made known to the Patent and Trademark Office in compliance with applicants' duty to disclose all information they are aware of which is believed relevant to the examination of the above-identified application, applicants believe that their invention is patentable.

Please acknowledge receipt of this Information Disclosure Statement and kindly make the cited references of record in the above-identified application.

Respectfully submitted,
Seed Intellectual Property Law Group PLLC



William T. Christiansen, Ph.D.
Registration No. 44,614

WTC:ljd

Enclosures:

Postcard
Form PTO/SB/21
Forms PTO-1449 (5 sheets)
Cited References (64)

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GP. 1623

PTO/SB/21 (08-00)

Approved for use through 10/31/2002. OMB 0651-0031

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TRANSMITTAL FORM

(To be used for all correspondence after initial filing)

Application Number	10/087,200
Filing Date	March 1, 2002
First Named Inventor	James E. Fleming
Group Art Unit	1623
Examiner Name	
Attorney Docket No.	390054.401C1

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ENCLOSURES (check all that apply)

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<input type="checkbox"/> Fee Transmittal Form <input type="checkbox"/> Fee Attached <input type="checkbox"/> Amendment/Response <input type="checkbox"/> After Final <input type="checkbox"/> Affidavits/declaration(s) <input type="checkbox"/> Extension of Time Request <input type="checkbox"/> Express Abandonment Request <input checked="" type="checkbox"/> Information Disclosure Statement; Forms PTO-1449 (5 sheets) <input checked="" type="checkbox"/> Cited References (64) <input type="checkbox"/> Certified Copy of Priority Document(s) <input type="checkbox"/> Response to Missing Parts under 37 C.F.R. 1.52 or 1.53 <input type="checkbox"/> Response to Missing Parts/Incomplete Application	<input type="checkbox"/> Assignment Papers (for an Application) <input type="checkbox"/> Drawing(s) <input type="checkbox"/> Request for Corrected Filing Receipt <input type="checkbox"/> Licensing-related Papers <input type="checkbox"/> Petition <input type="checkbox"/> Petition to Convert to a Provisional Application <input type="checkbox"/> Power of Attorney, Revocation, Change of Correspondence Address <input type="checkbox"/> Declaration <input type="checkbox"/> Statement under 37 CFR 3.73(b) <input type="checkbox"/> Terminal Disclaimer <input type="checkbox"/> Small Entity Statement <input type="checkbox"/> Request for Refund	<input type="checkbox"/> CD(s), Number of CD(s) _____ <input type="checkbox"/> After Allowance Communication to Group <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences <input type="checkbox"/> Appeal Communication to Group (Appeal Notice, Brief, Reply Brief) <input type="checkbox"/> Proprietary Information <input type="checkbox"/> Status Letter <input checked="" type="checkbox"/> Return Postcard <input type="checkbox"/> Additional Enclosure(s) (please identify below): _____ _____ _____ _____
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Remarks

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Individual Name	William T. Christiansen, Ph.D.	 00500
Signature		
Date	7/24/02	

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, Washington, D.C. 20231 on the date specified below.

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FORM PTO-1449
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PATENT AND TRADEMARK OFFICEATTY. DOCKET NO.
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U.S. PATENT DOCUMENTS

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	AA	4,190,328	02/26/80	Levine et al.	350	320	
	AB	4,242,447	12/30/80	Findl et al.	435	39	
	AC	4,288,539	09/08/81	McAleer et al.	435	7	
	AD	4,544,546	10/01/85	Wang et al.	424	7.1	
	AE	4,710,472	12/01/87	Saur et al.	435	287	
	AF	4,859,584	08/22/89	Horan et al.	435	29	
	AG	5,057,413	10/15/91	Terstappen et al.	435	6	
	AH	5,314,805	05/24/94	Haugland et al.	435	29	
	AI	5,436,134	07/25/95	Haugland et al.	435	34	
	AJ	5,437,980	08/01/95	Haugland	435	6	
	AK	5,534,416	07/09/96	Millard et al.	436	34	
	AL	5,545,535	08/13/96	Roth et al.	435	34	
	AM	5,563,070	10/08/96	Yamamoto et al.	436	63	
	AN	5,582,984	12/10/96	Bieniarz et al.	435	6	
	AO	5,658,751	08/19/97	Yue et al.	435	34	
	AP	5,695,946	12/09/97	Benjamin et al.	435	7.32	
	AQ	5,734,058	03/31/98	Lee	546	176	
	AR	5,798,115	08/25/98	Santerre et al.	424	423	
	AS	5,804,448	09/08/98	Wang et al.	436	63	
	AT	5,888,736	03/30/99	Lacroix et al.	435	6	

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	TRANSLATION	
					YES	NO

OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)

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	AS					

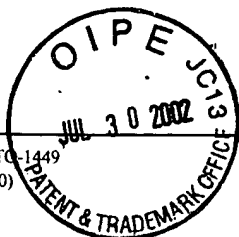
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	BA	5,939,282	08/17/99	Harman et al.	435	29	
	BB	5,968,762	10/19/99	Jadamec et al.	435	18	
	BC	5,994,067	11/30/99	Wood et al.	435	6	

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	TRANSLATION	
					YES	NO
	BD	DE 19832007 A1	01/27/00	Germany		X
	BE	GB 1503828	03/15/78	England		
	BF	WO 97/17463	05/15/97	WIPO		

OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)

	BG	English Abstract of DE 19832007 A1, esp@cenet, January 27, 2000.
	BH	Ahn et al., "PicoGreen quantitation of DNA: effective evaluation of samples pre- or post-PCR," <i>Nucleic Acids Research</i> 24(13):2623-2625, 1996.
	BI	Blaheta et al., "Development of an ultrasensitive in vitro assay to monitor growth of primary cell cultures with reduced mitotic activity," <i>Journal of Immunological Methods</i> 211:159-169, 1998.
	BJ	Bolger et al., "Fluorescent Dye Assay for Detection of DNA in Recombinant Protein Products," <i>BioTechniques</i> 23(3):532-536, 1997.
	BK	Catt et al., "Hoechst staining and exposure to UV laser during flow cytometric sorting does not affect the frequency of detected endogenous DNA nicks in abnormal and normal human spermatozoa," <i>Molecular Human Reproduction</i> 821-825, 1997.
	BL	Chadwick et al., "Heterozygote and Mutation Detection by Direct Automated Fluorescent DNA Sequencing Using a Mutant <i>Taq</i> DNA Polymerase," <i>BioTechniques</i> 20(4):676-683, April 1996.
	BM	Emaus et al., "Rhodamine 123 as a probe of transmembrane potential in isolated rat-liver mitochondria: spectral and metabolic properties," <i>Biochimica et Biophysica Acta</i> 850:436-448, 1986.
	BN	Enger, Ø., "Use of the Fluorescent Dye PicoGreen™ for Quantification of PCR Products after Agarose Gel Electrophoresis," <i>BioTechniques</i> 21(3):372-374, September 1996.
	BO	Ferguson and Denny, "Microbial mutagenic effects of the DNA minor groove binder pibenzimol (Hoechst 33258) and a series of mustard analogues," <i>Mutation Research</i> 329(1):19-27, 1995.

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FORM PTO-1445
(REV. 7-80)U.S. DEPARTMENT OF COMMERCE
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FOREIGN PATENT DOCUMENTS

DOCUMENT NUMBER	DATE	COUNTRY	TRANSLATION YES NO
CB			

OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)

CC	Ferrari et al., "Analytical Methods for the Characterization of Cationic Lipid-Nucleic Acid Complexes," <i>Human Gene Therapy</i> 9:341-351, February 10, 1998.
CD	Griffith et al., "An evaluation of luminometry as a technique in food microbiology and a comparison of six commercially available luminometers," <i>Food Science and Technology Today</i> 8(4):209-216, 1994.
CE	Hall et al., "An Approach to High-throughput Genotyping," <i>Genome Research</i> 6:781-790, 1996.
CF	Haugland, R.P., <i>Handbook of Fluorescent Probes and Research Chemicals</i> , Spence, M. (ed.), Molecular Probes, Eugene, OR, 1996, "PicoGreen dsDNA Quantitation Reagent," pg. 162.
CG	Holst et al., "Allosteric modulation of AMPA-type glutamate receptors increases activity of the promoter for the neural cell adhesion molecule, N-CAM," <i>Proc. Natl. Acad. Sci. USA</i> 95:2597-2602, March 1998.
CH	Hopwood et al., "Rapid Quantification of DNA Samples Extracted from Buccal Scrapes Prior to DNA Profiling," <i>BioTechniques</i> 23:18-20, July 1997.
CI	Latt and Wohlleb, "Optical Studies of the Interaction of 33258 Hoechst with DNA, Chromatin, and Metaphase Chromosomes," <i>Chromosoma</i> 52(4):297-316, 1975.
CJ	Mansfield et al., "Nucleic acid detection using non-radioactive labeling methods," <i>Molecular and Cellular Probes</i> 9:145-156, 1995.
CK	Marie et al., "Application of the Novel Nucleic Acid Dyes YOYO-1, YO-PRO-1, and PicoGreen for Flow Cytometric Analysis of Marine Prokaryotes," <i>Applied and Environmental Microbiology</i> 62(5):1649-1655, May 1996.
CL	Matsuzaki et al., "Nuclear Staining for Laser Confocal Microscopy," <i>Acta Histochem. Cytochem.</i> 30(3):309-314, 1997.
CM	Moran et al., "Nonelectrophoretic Genotyping Using Allele-Specific PCR and a dsDNA-Specific Dye," <i>BioTechniques</i> 24:206-212, February 1998.

EXAMINER

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FORM PTO-144
(REV. 7-80)U.S. DEPARTMENT OF COMMERCE
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APPLICANTS

James E. Fleming and Jason Buck Somes

FILING DATE

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U.S. PATENT DOCUMENTS

*EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
EA						
EB						
EC						

FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	DATE	COUNTRY	TRANSLATION	
				YES	NO
ED					
EE					
EF					

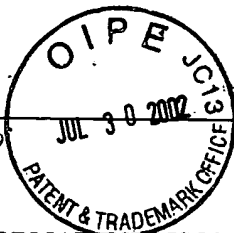
OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)

EG	Singer et al., "Characterization of PicoGreen Reagent and Development of a Fluorescence-Based Solution Assay for Double-Stranded DNA Quantitation," <i>Analytical Biochemistry</i> 249:228-238, 1997.
EH	Singer et al., <i>Biotechnology International</i> , Connor and Fox (eds.), Universal Medical Press, Inc., 1997, "Sensitive Fluorescent Stains for Detecting Nucleic Acids in Gels and Solutions," pp. 267-277.
EI	Singhal et al., "DNA-Protein Interactions and Separation of Restriction Fragments by Capillary Electrophoresis," <i>The FASEB Journal</i> 9(6):A1423, Abstract No. 965, April 24, 1995.
EJ	Suzuki et al., "Fluorescence Counter-Staining of Cell Nuclear DNA for Multi-Color Laser Confocal Microscopy," <i>Acta. Histochem. Cytochem.</i> 31(4):297-301, 1998.
EK	Tranvik, L.J., "Rapid fluorometric assay of bacterial density in lake water and seawater," <i>Limnol. Oceanogr.</i> 42(7):1629-1634, 1997.
EL	Veldhuis et al., "Cellular DNA Content of Marine Phytoplankton Using Two New Fluorochromes: Taxonomic and Ecological Implications," <i>J. Phycol.</i> 33:527-541, 1997.
EM	Yan et al., "Characteristics of Different Nucleic Acid Staining Dyes for DNA Fragment Sizing by Flow Cytometry," <i>Anal. Chem.</i> 71(24):5470-5480, December 15, 1999.
EN	Zhu et al., "Cell cycle-dependent modulation of telomerase activity in tumor cells," <i>Proc. Natl. Acad. Sci. USA</i> 93:6091-6095, June 1996.
EO	
EP	

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FORM*PTO-1449
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FOREIGN PATENT DOCUMENTS

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DB			YES NO

OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)

DC	Murakami et al., "Quantitation of Adenovirus DNA and Virus Particles with the PicoGreen Fluorescent Dye," <i>Analytical Biochemistry</i> 274:283-288, 1999.
DD	Nebe-von Caron et al., "Assessment of bacterial viability status by flow cytometry and single cell sorting," <i>Journal of Applied Microbiology</i> 84:988-998, 1998.
DE	Niemeyer et al., "Fluorometric Polymerase Chain Reaction (PCR) Enzyme-Linked Immunosorbent Assay for Quantification of Immuno-PCR Products in Microplates," <i>Analytical Biochemistry</i> 246:140-145, 1997.
DF	Papadimitriou and Lelkes, "Measurement of cell numbers in microtiter culture plates using the fluorescent dye Hoechst 33258," <i>Journal of Immunological Methods</i> 162:41-45, 1993.
DG	Parpais et al., "Effect of phosphorus starvation on the cell cycle of the photosynthetic prokaryote <i>Prochlorococcus</i> spp.," <i>Marine Ecology Progress Series</i> 132:265-274, February 29, 1996.
DH	Pinder et al., <i>New Techniques in Food and Beverage Microbiology</i> , Kroll et al. (eds.), Blackwell Scientific Publications, 1993, chapter 6, "Detection and Enumeration of Viable Bacteria by Flow Cytometry," pp. 67-86.
DI	Rago et al., "DNA Fluorometric Assay in 96-Well Tissue Culture Plates Using Hoechst 33258 after Cell Lysis by Freezing in Distilled Water," <i>Analytical Biochemistry</i> 191:31-34, 1990.
DJ	Romppanen et al., "Optimal Use of the Fluorescent PicoGreen Dye for Quantitative Analysis of Amplified Polymerase Chain Reaction Products on Microplate," <i>Analytical Biochemistry</i> 279:111-114, March 2000.
DK	Rundquist et al., "Cytofluorometric Quantitation of Acridine Orange Uptake by Cultured Cells," <i>Acta Pathologica Microbiol. Immunol. Scand. Sect. A</i> 92:303-309, 1984.
DL	Seville et al., "Fluorometric Assay for DNA Polymerases and Reverse Transcriptase," <i>BioTechniques</i> 21(4):664-672, October 1996.

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